

**REMARKS**

The Office Action dated November 6, 2009, has been received and carefully considered. The following remarks form a full and complete response thereto. Claim 30 is newly presented. No new matter is added.

**Claim rejections under 35 U.S.C. § 103(a)**

Claims 1, 3, 5, 8-10, 13 and 24-26 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent 4,455,359 to Pätzold in view of U.S. Patent 4,830,928 to Tamagawa. Applicants traverse the rejection and submit that the rejection is improper.

Independent claim 1, from which claims 3, 5, 8-10, 13 and 24-26 depend directly or through an intervening claim, recites a security paper for producing value documents, including a creasable, foldable, multilayer substrate. The multilayer substrate has at least one paper layer laminated on both sides all over to plastic foil. The plastic foil is equipped with a security feature. The plastic foil has a thickness of 1 to 20  $\mu\text{m}$ . The paper layer has a weight of 50 to 100  $\text{g/m}^2$ .

As a result of the novel configuration claimed in claim 1, a security paper is provided that has the feel and sound of paper, as far as possible (see paragraph 10 of the present application).

Pätzold relates to laminated tamper-proof cards such as a credit card having photographic information. Pätzold discloses, in its Background, cards having a photographic paper inlet welded between two clear foils by the application of pressure and temperature round the edges. Col. 1 ll. 16-39. Pätzold teaches to indissolubly attach the whole surface of the photographic material to the transparent foil so that the information carrier is no longer accessible without destruction thereof. Col. 1 ll. 51-60. Pätzold relates to photographic information carriers and, in particular, to photographic information carriers in card form, and suggests that the information carrier has a certain thickness. The thickness of the foils in Pätzold is from 15 to 250  $\mu\text{m}$ , preferably 50 to

200  $\mu\text{m}$ . The photographic paper used in this context is accordingly also relatively heavy (e.g., conventional photographic paper with a weight of approximately 120 g/m<sup>2</sup>). Stiffness is a concern as can be concluded from the thickness and weight values given in Pätzold and as can further be concluded from col. 4 ll. 61 and 62 (foil thickness depends on required document stiffness). Pätzold provides no suggestion whatsoever of the look and feel of paper. In fact, the Office conceded that Pätzold fails to disclose the claimed range of paper layer weights.

Tamagawa discloses a support for a photographic paper which is characterized by an improved surface smoothness. Abstract. To achieve this improvement, the paper layer of the photographic paper is treated with a cationic softening agent. Col. 2 ll. 19-20. To render the support water resistant, both sides of the support are coated with polyethylene layers (see col. 1 ll.11-13), the layers being applied by extrusion (see col. 1 ll. 47-59). A photosensitive layer, e.g., on a gelatine basis, is then applied to the paper support that has already been coated with the plastic layer (see col. 4 ll. 13-15), that is, the photosensitive layer is essentially unprotected against any kind of manipulation. Tamagawa is restricted to ordinary photographic paper and fails to disclose or suggest security documents and the like.

Applicants submit that the rejection is improper at least for at least the reason that a person of ordinary skill in the art, starting with Pätzold and confronted with the problem of rendering the respective security document more “paper-like,” would not have consulted Tamagawa. First, the documents of Pätzold and Tamagawa structurally differ in many aspects. While Pätzold refers to tamper-proof information carriers, Tamagawa solely refers to ordinary photographic paper—no security feature is disclosed. According to Pätzold, the gelatine layer that is carrying the information to be protected is laminated with a foil in order to prevent any kind of manipulation to the gelatine layer. The respective foil is so adhered to the gelatine layer that the gelatine layer is necessarily destroyed when the foil is removed. In contrast, Tamagawa discloses, as already mentioned above, that the photosensitive gelatine layer, which

may carry any kind of information, is coated on top of the foil coating, *i.e.*, any kind of manipulation of the photosensitive layer appears to be possible.

Second, the foils according to Pätzold are indissolubly laminated to the gelatine layer on the paper layer by means of an adhesive (critical aspects) as protection against forgery. The coating according to Tamagawa, provided to render the paper support water resistant, is molten polyethylene cast onto the surface of the base paper layer.

Third, the photographic paper according to Tamagawa is improved concerning its surface smoothness, *i.e.*, a surface of optimized smoothness is to be achieved. In contrast, Pätzold teaches use of some kind of matting agent (see Pätzold col. 2 ll. 25-64, claim 6) in order to make the surface of the document more suitable for printing, *i.e.*, achieving some kind of surface roughness.

Therefore, Applicants submit that a person of ordinary skill in the art, trying to achieve the advantages of the present invention and starting with the disclosure of Pätzold, would not have even consulted Tamagawa. The design goals and structural differences of Pätzold and Tamagawa, as discussed above, not only mutually teach away from the combination of these references, but would fail to result in the claimed security paper, and would result in a structure not suitable for the purposes stated in either of the references. To the extent that the Office contends that a person of ordinary skill in the art would have selected only particular disclosed features of the references for combination, Applicants submit that the Office is employing impermissible hindsight and using the present application as a blueprint to combine references. Thus, the rejection is improper. A person of ordinary skill in the art would not have combined Pätzold and Tamagawa and claim 1 and depending claims are therefore not obvious in view of Pätzold and Tamagawa and the rejection is improper. Applicants request that the rejection of claims 1, 3, 5, 8-10, 13 and 24-36 be withdrawn and that claims 1, 3, 5, 8-10, 13 and 24-36 be allowed.

Claims 2, 4, 6, 7, 14-16, 20-22 and 27-29 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Pätzold in view of Tamagawa and further in view of

U.S. Pat. 5,868,902 to Howland and further in view of U.S. Pat. 4,462,866 to Tooth and as evidenced by an article entitled "Paper, Its making, merchanting and usage" by Haylock. Applicants traverse the rejection because the additional references fail to remedy the deficiencies of Pätzold and Tamagawa as discussed above with regard to claim 1, from which claims 2, 4, 6, 7, 14-16, 20-22 and 27 depend directly or through intervening claims.

The deficiencies of Pätzold and Tamagawa as discussed above with regard to claim 1 similarly apply to claim 28 and claim 29, dependent thereto, which defines a method for producing a creasable, foldable security paper for producing value documents. The method includes a step in which at least one paper layer is produced in a paper machine, the at least one paper layer having a weight of 50 to 100 g/m<sup>2</sup>. The method also includes a step in which plastic foil is extruded onto both surfaces of the paper layer all over, the plastic foil being already equipped with at least one security feature or equipped therewith after application, the plastic foil having a thickness of 1 to 20 µm.

The excerpt of Haylock provided by the Office fails to counter the improper combination of Pätzold and Tamagawa.

Howland discloses forming paper in a wet state, the paper having a security feature, applying to the paper a sizing agent, and applying a coating comprising an unpigmented polyurethane. Abstract. Howland also fails to counter the improper combination of Pätzold and Tamagawa.

Tooth discloses security papers having an elongate element partially disposed within the thickness of the paper and used for bank notes and checks. Abstract. Tooth also fails to counter the improper combination of Pätzold and Tamagawa.

Moreover, there would have been no motivation for the person of ordinary skill in the art to have used the papers of Howland or Tooth as a support material for a photographic information carrier on which a gelatine layer carrying photographic

material is to be carried as taught by Pätzold or Tamagawa. The mere fact that such a paper layer existed in the form of security paper would not have rendered it obvious by itself to have replaced the "conventional photographic paper" as taught by Pätzold, col. 6 ll. 30-32, or Tamagawa, col. 1 ll. 6-7, with such specific security paper typically used with banknotes, but not with cards such as credit cards.

Therefore, at least because a person of ordinary skill in the art would not have combined the references as alleged, the rejection is improper and Applicants request that the rejection of claims 2, 4, 6, 7, 14-16, 20-22 and 27-29 be withdrawn.

Claims 11, 12, 17 and 18 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Pätzold and Tamagawa in view of U.S. Pat. Application Pub. US 2002/0022112 to Hoeppner. Applicants traverse the rejection because Hoeppner fails to remedy the deficiencies of Pätzold and Tamagawa as discussed above with regard to claim 1, from which claims 11, 12, 17 and 18 depend directly or through intervening claims.

Hoeppner fails to cure these deficiencies because Hoeppner is concerned with plastic cards—not creasable, foldable security paper—and fails to counter the mutual teachings away of Pätzold with Tamagawa. One of ordinary skill in the art would not have combined Pätzold and Tamagawa with Hoeppner because Hoeppner is in a different field. In particular, Hoeppner is directed exclusively towards the production of cards including a plastic coating which permits subsequent personalization of the respective cards by printing, laser, embossing or the like. See Hoeppner claims 5-7, paras. [0016], [0026], [0032], [0038], [0048], and [0055].

Even if one were to coat a piece of paper as taught by Hoeppner, one would end up with a security card, since it is definitely not possible to maintain the properties of creasability and foldability as well as the feel and sound of paper after having applied a first plastic coating to both sides of the paper layer and, after printing the same in order to apply further security features, having applied additional covering films or composite covering films on both sides of the already covered substrate. See Hoeppner paras.

[0016]-[0020]. The plastic coating of Hoeppner is embossable because embossing requires material that can be raised to create a design. One of ordinary skill in the art would understand that to emboss a coating that will be subjected to further films would counteract the properties of creasability and foldability. Therefore, Hoeppner's plastic card structure actually teaches away from the presently claimed invention.

Therefore, Applicants respectfully request that the rejection be withdrawn, and claims 11, 12, 17 and 18 be allowed.

Also, apparently referring to claim 18, the Office alleged that "[a]bsent convincing evidence of unexpected properties derived therefrom, it would have been obvious to use any laminating adhesive, including the claimed water-soluble adhesive." Office Action at 10. Applicants submit that the Office has failed to state a *prima facie* rejection of claim 18 by failing to provide evidence in support of this allegation. Applicants request that the Office provide evidence to substantiate the allegation or withdraw the rejection of claim 18 for at least this additional, independent reason.

Claim 23 was rejected under 35 U.S.C. § 103(a) as being obvious over Pätzold in view of Tamagawa and further in view of U.S. Pat. No. 3,489,643 to Hoffman. Applicants traverse the rejection of claim 23 as improper because a person of ordinary skill in the art would not have combined the references as asserted by the Office.

Claim 23 depends from independent claim 1 through intervening claim 7 and is patentable over the combination of Pätzold and Tamagawa for at least for the reasons given above with regard to claims 1 and 7. Claim 23 provides that the security paper comprises, at least partly, polyamide fibers. The Office cited Hoffman's disclosure of "polyamide fibers incorporated into nonwoven papers [to] improve tear strength [and] resistance to tear propagation." Office Action at 10 citing Hoffman at Abs., col. 1 ll. 61-72, col.2 ll. 1-3, col. 4 ll. 29-31 and 44-50. Applicants submit that it is precisely these anti-tear features which would have taught away from a combination of Hoffman with Pätzold and Tamagawa. In particular, in the discussion of background art, Pätzold discloses that "[a]ny attempt subsequently to strip off the laminating foil will then cause

the paper to be torn off with the foil in the areas which have not been so prepared since the force of the pull will be transferred to the less resistant paper surface.” Col. 1 ll. 20-24 (emphasis added). Pätzold further discloses that an object of his invention is to provide a tamper-proof photographic information carrier so “indissolubly attached” to a transparent foil that the information cannot be accessed, *i.e.*, the foil cannot be removed, without destruction of the information carrier. Col. 1 ll. 51-60. A person of ordinary skill in the art, presented with the Pätzold’s design criterion for tamper evidencing destruction, would not look to Hoffman, which discloses materials having increased strength and reduced destructability. Thus, the rejection of claim 23 is improper and Applicants request that the rejection be withdrawn for at least this reason.

### **New Claim 30**

New independent claim 30 is presented. Claim 30 recites a multilayer substrate having at least one paper layer having laminated plastic foil extruded onto both sides. Support for claim 30 is found at least in paragraph [0053]. Applicants submit that claim 30 is patentable over the cited references for at least the reasons given above with regard to the patentability of claims 1 and 28.

In view of the foregoing, Applicants submit that all rejections and objections have satisfactorily been addressed. Accordingly, Applicants submit that this application is in condition for allowance and request that it be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants’ undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event that this paper is not timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account No. 02-2135.

Respectfully submitted,

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